

**AMENDMENT AND RESPONSE****PAGE 2**

Serial No.: 10/668,752

Filing Date: 9/23/2003

Attorney Docket No. 125.067US02

**Title: METHODS TO CONTROL THE DROOP WHEN POWERING DUAL MODE PROCESSORS AND ASSOCIATED CIRCUITS**

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**Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application:

**Listing of claims:**

1. (Currently Amended) A method of operating a DC/DC converter having an output coupled to a load with two or more modes of operations, the method comprising:  
selectively-coupling a power source to an input of the DC/DC converter; and  
creating a droop in an output signal to the load in response in part to a signal from the power source and in response in part to the operating mode of the load such that the droop is substantially symmetrical throughout the operational modes of the DC/DC converter.
2. (Original) The method of claim 1, wherein creating the droop in the output signal further comprises:  
multiplying a sensed current in a feedback loop with a signal that is inversely proportional to a frequency of the load.
3. (Original) The method of claim 1, wherein creating the droop in the output signal further comprises:  
multiplying a sensed current in a feedback loop with a signal that is inversely proportional to a reference voltage, wherein the reference voltage is associated with a desired operating voltage of the load.
4. (Original) The method of claim 1, wherein creating the droop in the output signal further comprises:  
multiplying a sensed current in a feedback loop with a signal inversely proportional to a reference voltage and a signal inversely proportional to a frequency in which the load operates, wherein the reference voltage is reflective of a desired operating voltage of the load.

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5. (Original) The method of claim 1, wherein creating the droop in the output signal further comprises:

multiplying a sensed current in a feedback loop with a signal that is inversely proportional to a reference voltage squared, wherein the reference voltage is reflective of a desired operating voltage of the load.

6. (Original) The method of claim 1, wherein creating the droop in the output signal further comprises:

controlling a gain of a buffer amplifier in a feedback loop with a frequency signal proportional to the frequency in which the load operates.

7. (Original) The method of claim 6, wherein the frequency signal is derived from a reference voltage, wherein the reference voltage is associated with a desired operating voltage of the load.

8. (Currently Amended) A method of operating a multi-mode DC/DC converter, the method comprising:

maintaining a substantially symmetrical voltage droop about select operating voltages throughout operational modes of the DC/DC converter.

9. (Previously presented) The method of claim 8, further comprising:

using a feedback loop to adjust the voltage droop.

10. (Previously presented) The method of claim 8, further comprising:

altering a slope of a load line in accordance with an operating mode to adjust the voltage droop.

11. (Previously presented) The method of claim 8, further comprising:

offsetting a reference to a feedback amplifier to adjust the voltage droop.